MICRO-553  Haptic human robot interfaces
Bouri Mohamed

Summary
This course teaches basic knowledge on haptic devices, force feedback and mechanical man-machine interfaces. Lectures are about 30%, the rest is hands-on practical work with the "haptic paddle", a complete mechanical device with full laptop control interface. Realization of project in groups of 2.

Learning Outcomes
By the end of the course, the student must be able to:
• Design a haptic interface for robot, rehabilitation, prothesis, exoskeleton
• Realize a haptic interface for robot, rehabilitation, prothesis, exoskeleton
• Analyze a haptic interface for robot, rehabilitation, prothesis, exoskeleton
• Assess / Evaluate a haptic interface for robot, rehabilitation, prothesis, exoskeleton
• Propose a haptic interface for robot, rehabilitation, prothesis, exoskeleton
• Defend the proposed solution
• Explain the purpose and function of a haptic interface

Transversal skills
• Set objectives and design an action plan to reach those objectives.
• Communicate effectively, being understood, including across different languages and cultures.
• Communicate effectively with professionals from other disciplines.
• Access and evaluate appropriate sources of information.
• Write a scientific or technical report.
• Write a literature review which assesses the state of the art.
• Make an oral presentation.
• Summarize an article or a technical report.

Assessment methods
Oral examination